

**GOVERNMENT OF INDIA  
AGRICULTURE  
LOK SABHA**

UNSTARRED QUESTION NO:305  
ANSWERED ON:19.11.2007  
NEW TECHNOLOGIES FOR AGRICULTURE  
Chitthan Shri N.S.V.

**Will the Minister of AGRICULTURE be pleased to state:**

(a) whether bio-technology and other new technological developments in the field of agriculture are major factors which would revolutionize the productivity in future; and

(b) if so, the steps taken by Government in this regard?

**Answer**

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (SHRI KANTILAL BHURIA)

(a) Yes, Sir. Biotechnology and other new technological developments in the field of agriculture would enhance the productivity in future. Biotechnology would contribute to:

- (i) increasing crop productivity, and thus help global food, feed and fibre security,
- (ii) lowering production costs,
- (iii) conserving biodiversity, as a land-saving technology capable of higher productivity,
- (iv) more efficient use of external inputs, for a more sustainable agriculture and environment,
- (v) increasing stability of production to lessen suffering during famines due to abiotic and biotic stresses;
- (vi) improving productivity of livestock and fisheries and
- (vii) to the improvement of economic and social benefits and the alleviation of poverty in developing countries like India.

(b) Following steps have been taken by Government:-

1. The Deptt. of Biotechnology, Ministry of Science and Technology, Govt. of India has taken many steps for infra-structural development for research in biotechnology and human resource development through out India and commercialization of its products.

2. The Deptt. of Agriculture and Cooperation, Ministry of Agriculture, Govt. of India constituted a Task Force on Agricultural Biotechnology under the Chairmanship of Dr. M.S. Swaminathan on 14th May, 2003. The Task Force submitted its report in June, 2004 inter alia recommending setting up of National Biotechnology Regulatory Authority (NBRA). The draft Cabinet Note which was considered by the committee of Secretaries (CoS) has been transferred to Department of Biotechnology, Ministry of Science and Technology as suggested by PMO. Necessary further action is being taken by Deptt. of Biotechnology, Ministry of Science & Technology and Ministry of Agriculture, Govt. of India for implementation of the recommendations of the Task Force.

3. Indian Council of Agricultural Research (ICAR) has taken several steps to intensify agricultural research work related to biotechnology. A Biotechnology Centre was established at Indian Agricultural Research Institute in 1985 to undertake research, training and education in agricultural biotechnology. A Network programme to develop transgenic in major crops such as rice, wheat, pulses, oilseeds, vegetables for introduction of various traits like tolerance to drought, salinity, and resistance to pests and diseases has been operational. Technologies such as marker-assisted selection and structural and functional genomics form an important part of this endeavour.

4. The biotechnological approaches of NBPGR, are primarily used for DNA fingerprinting of released varieties and elite germplasm of crops of national importance; studies on crop diversity, domestication, molecular phylogeny and biosystematics; researches on detection of transgenes and terminator gene technology during quarantine processing of introduced GM crops, and in vitro conservation and cryo-preservation of crop germplasm in National Genebank.

5. Animal Science research Institutes as well as the two deemed universities (IVRI & NDRI) under ICAR have initiated research in Animal biotechnology leading to development of disease diagnostic kits and value added livestock/dairy products.

6. ICAR and the Department of Biotechnology fund several projects such as sequencing of rice, tomato and potato genomes, development of improved crops varieties through biotechnology intervention, introduction of 'Golden rice' trait in Indian rice cultivars

for amelioration of Vitamin A deficiency etc.